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BOARD OF EDITORS { Mr. Horace E. Smith, Chief Clerk Weather Bureau, Professors Henry A. Hazen, Thomas Russell, and Charles F. Marvin, and Mr. Edward B. Garriott, in charge of Review Room.

INTRODUCTION.

This REVIEW is based on reports for September, 1891, from 2,571 regular and voluntary observers. These reports are classified as follows: 158 reports from Weather Bureau stations; 118 reports from United States Army post surgeons; 1,721 monthly reports from state weather service and voluntary observers; 32 reports from Canadian stations; 179 reports through the Central Pacific Railway Company; 363 marine reports through the co-operation of the Hydrographic Office, Navy Department; marine reports through the "New York Herald Weather Service;" monthly reports from the local weather services of Alabama, Arkansas, Colorado, Illinois, Indiana, Iowa Weather and Crop Service, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New England, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, and Wisconsin, and international simultaneous observations. Trustworthy newspaper extracts and special reports have also been used.

CHARACTERISTICS OF THE WEATHER FOR SEPTEMBER, 1891.

In the north-central districts and at stations on the east New England coast the month was the warmest September on record. From the 16th to the 19th a warm wave extended over the central valleys and east of the Alleghany Mountains, attended by the highest temperature on record for the season from the lower Missouri valley to the upper lakes, and from the 21st to the 25th the highest temperature on record for the third decade of September was noted in the upper Mississippi and Ohio valleys and the Lake region.

The coolest weather of the month occurred from the Lake region and lower Missouri valley to the Gulf and middle Atlantic and New England coasts during the first decade, and along the Pacific coast, over the Rocky Mountain and plateau regions, from the Missouri Valley over the west part of the Lake region, on the south Atlantic coast, and in Florida during the third decade of the month. Light and heavy frosts occurred in the northern tier of states; as far south as the Ohio and lower Missouri valleys, Colorado, and Utah; and in Oregon and northern California.

PRECIPITATION.

Less than the usual amount of precipitation was reported east of the 100th meridian, except over the Florida Peninsula and in the Canadian Maritime Provinces, where the rainfall was in excess of the average. The precipitation was also generally in excess in the Rocky Mountain and plateau regions. Over the middle-eastern part of the plateau region, on the adjoining eastern slope of the Rocky Mountains, and on the extreme north Pacific coast the monthly precipitation was the greatest, and at stations in the central valleys it was the least ever reported for September. The first light snow of the season was noted at elevated stations in the middle and northern Rocky Mountain and plateau regions during the third decade of the month, and in the mountains of Colorado a total depth of five to ten inches was reported.

STORMS.

Compared with the summer months a marked decrease in the number of local storms is noted for September. No tornadoes were reported, and the more severe storms were general in character, and, as a rule, unattended by serious loss.

AURORAS.

Numerous and widely-observed auroral displays were reported. On a number of dates they were noted generally in the more northern states east of the Rocky Mountains, and on the 11th from the Atlantic to the Pacific coasts and southward in the central valleys to the 40th parallel.

DROUGHT.

In parts of New England, the middle Atlantic and east Gulf states, in the states of the middle and lower Mississippi, Ohio, and lower Missouri valleys, and in portions of the upper lake region the month was very dry, and in areas in the Southern States crops were injured by drought. Navigation on the middle and lower Mississippi river and tributaries was rendered difficult by low water.

ATMOSPHERIC PRESSURE (expressed in inches and hundredths).

The distribution of mean atmospheric pressure for September, 1891, as determined from observations taken daily at 8 a. m. and 8 p. m. (75th meridian time), is shown on Chart II by isobars.

The mean pressure was highest along the Atlantic coast between the 35th and 42d parallels and thence westward over the Ohio Valley and Tennessee, where it was above 30.15, whence it decreased northward to 30.00 over the lower Saint Lawrence valley, northwestward to less than 29.90 over the British Northwest Territory, and westward to less than 29.85 over the west part of the southern plateau region. From the southern plateau region there was an increase in press-

ure to the north Pacific coast, where the mean values were above 30.00.

A comparison of the pressure chart for September, 1891, with that of the preceding month shows a general increase in mean pressure, except in the north-central districts, on the north and south Pacific coasts, over the west part of the southern plateau, in the lower Rio Grande valley, and over southern Florida. The greatest increase in mean pressure was noted from the upper Ohio valley and the lower lake region to the middle Atlantic coast, where it exceeded .15, and the most marked decrease occurred in the British Possessions north of Montana, and on the extreme north Pacific coast, where it was more than .05.

The mean pressure was above the normal east of the middle and southeast slopes of the Rocky Mountains and the Red River of the North Valley, and on the middle and south Pacific coasts. The mean values were generally below the normal over the plateau region, on the north Pacific coast, and on the northeastern slope of the Rocky Mountains. The greatest departure above the normal pressure occurred from the middle-eastern slope of the Rocky Mountains to the Atlantic coast from Nova Scotia to southern Florida, where it was more than .05, and the most marked departure below the normal was noted over British Columbia and Vancouver Island, where it exceeded .05.

HIGH AND LOW AREAS.

The tracks of areas of high and low pressure for September, 1891, are plotted on Charts IV and I, respectively, and some of the more prominent characteristics of the areas are shown in the table at the end of this chapter.

HIGH AREAS.

Six well-defined high areas appeared, the average number traced for September during the last 18 years being 6.5. Of the high areas traced for the current month three advanced from the British Northwest Territory, one appeared north of the Lake region, and two were first located on the north Pacific coast. Except in the case of number I the high areas of the first two decades of the month moved slowly southeastward from the British Possessions and passed off the New New England or middle Atlantic coasts, and those of the last decade advanced from the north Pacific coast to the lower Missouri valley, and moved thence east-northeastward to the upper Saint Lawrence valley and New England, their rate of advance, 40 miles per hour, being much greater than the average velocity of high areas for September. The following is a description of the high areas traced:

I.—The month opened with high pressure over the eastern and extreme northwestern parts of the country and low pressure from the Red River of the North Valley to the southern plateau region. The morning of the 1st high area I was central over Alberta, whence it moved to Kansas by the 3d, passed over the upper lake region during the 4th, and reached Nova Scotia the night of the 5th. On the 1st and 2d a cool wave overspread the middle and lower Missouri and upper Mississippi valleys, and on the 1st the greatest abnormal temperature fall in 12 hours noted for the month, 28°, occurred at Rapid City, S. Dak. On the 3d heavy and light frosts occurred from Wyoming to Wisconsin. The lowest temperature of the month was noted at stations on the eastern slope of the Rocky Mountains, and the first light frost of the season was reported at Lander, Wyo., and Duluth, Minn. On the 4th frost was reported in the upper Mississippi and lower Missouri valleys, and the west part of the Lake region. The lowest temperature of the month occurred at stations from Minnesota to Texas, and the first light frost of the season was reported at Platte River, Mo., and Springfield, Ill. On the 5th and 6th the lowest temperature of the month was noted in the middle Gulf states, attending a short-lived high area which appeared in the rear of low area I.

II.—Appeared north of Montana the morning of the 5th, remained nearly stationary over the Red River of the North Valley during the 6th and 7th, and passing thence southeastward was central off the new Jersey coast the night of the 10th. On the 8th the first light frost of the season was reported at Detroit and Lansing, Mich., and the lowest temperature of the month occurred at Toledo, Ohio. On the 9th heavy frost was reported in Oxford county, Maine; heavy frost, and ice one-half inch thick, were noted at Blue Knob, Pa.; at Baltimore, Md., the mean temperature was the lowest ever noted for September; the first light frost of the season occurred at Manchester, N. H. On the 10th heavy frost was reported in central and northeastern Pennsylvania, and on low ground in Carroll county, Maryland. On the 10th and 11th heavy frost occurred in northern and western Connecticut. During the 9th and 10th the lowest temperature of the month was noted from the upper Ohio valley to the Atlantic coast north of the 40th parallel.

III.—Appeared north of Montana on the 12th, passed thence southeastward to the region between the Ohio River and the south Atlantic coast, where it remained nearly stationary from the evening of the 14th to the morning of the 17th, and moving thence eastward was central off the North Carolina coast the night of the 17th. This area had the slowest advance movement, 20 miles per hour, noted in connection with the high areas of the month, and its passage was attended on the 15th by the lowest temperature of the month in east Tennessee and the west parts of the Carolinas.

IV.—Was central north of the Lake region on the 19th, whence it moved southeastward and passed off the south New England coast during the 20th, its passage being unattended by noteworthy features.

V.—The presence of this high area off the north Pacific coast was indicated by reports of the 22d, and the evening of the 23d it was central on the Washington coast, whence it passed to the lower Missouri valley by the 25th, thence over the Lake region by the morning of the 26th, and to the New England coast by the evening of that date, its average velocity across the continent being 40 miles per hour. The greatest abnormal rise in pressure in 12 hours noted for the month, .62 inch, occurred at Calgary, N. W. T., on the 23d, and at Dodge City, Kans., the abnormal temperature fall in 12 hours was 27° on the 24th. The first light frost of the season was reported at Albany, Oregon, on the 22d; at Baker City, Oregon, on the 23d; and at Salt Lake City, Utah, and Choteau, Mont., on the 24th. The first snow of the season was reported in Wyoming on the 24th. The first killing frost of the season was reported at Baker City, Oregon, on the 24th. The lowest temperature of the month was reported at stations in the middle plateau and in the middle Missouri valley on the 24th and 25th.

VI.—Appeared on the north Pacific coast on the 27th, whence it moved to the lower Missouri valley by the morning of the 29th, and to the upper Saint Lawrence by the evening of the 30th. This area, like number V, had an unusually rapid advance movement, its average velocity being 40 miles per hour, and the morning of the 30th the highest pressure reported for the month, 30.62, was noted at Rockliffe, Ontario. The first light frost of the season was reported at Portland, Oregon, on the 27th; at Kansas City, Mo., Leavenworth and Abilene, Kans., and Omaha, Nebr., on the 29th; and at Chicago, Ill., on the 30th. The first killing frost of the season was reported at Topeka, Kans., on the 29th, and at Farmington, Me., on the 30th. The lowest temperature of the month occurred on the Pacific coast north of the 40th parallel from the 27th to 30th, and from the middle and lower Missouri valleys over the upper lake region during the 29th and 30th.

LOW AREAS.

The usual course of September low areas over the eastern part of the country is north of the 40th parallel, and the only storms of marked strength which visit the southeastern districts are those of tropical origin. September storms of this class, averaging about one per year, generally move westward from the vicinity of the Windward Islands and recurve over the Gulf of Mexico.

Twelve low areas appeared during the current month, the average number traced for September during the last 18 years being 10. The tracks of 5 of these low areas were traceable to the Pacific coast north of the 45th parallel; 3 were first located in the British Northwest Territory; 2 over the plateau region; one in the Red River of the North Valley; and one over the south Atlantic states. The storms generally pursued an easterly course over the north part of the Lake region and the Saint Lawrence Valley, and but one low area, number III, was plotted south of the 40th parallel. The average rate of advance of the low areas, 27 miles per hour, was about the same as the average velocity noted for September of previous years. The following is a description of the low areas whose tracks appear on Chart I:

I.—Moved from the Red River of the North Valley to the region north of Lake Superior during the 1st, with wind velocities of 30 to 60 miles per hour over eastern Montana and the Dakotas, and rain from the middle and northeast slopes of the Rocky Mountains to the Red River of the North Valley. During the 2d and 3d the advance of this storm was retarded by high pressure to the east and southeast, and it moved slowly eastward with diminished energy after the 2d, attended by fresh gales over the Lake region, rain from the Lake region over the central valleys and middle and south Atlantic states, and thunderstorms from the Lake region to Arkansas and Tennessee. On the 4th the storm-center passed to the Gulf of Saint Lawrence.

II.—Advanced from the Pacific Ocean and the evening of the 2d was central over Alberta. During the 3d high area I occupied the central valleys and this storm moved slowly eastward north of Montana. During the 4th the storm remained nearly stationary over Manitoba, high area I occupied the Lake region, wind velocities of 30 to 40 miles per hour were reported over the Dakotas, western Iowa, and western Minnesota, and areas of light rain were noted over the middle plateau region and on the northeast slope of the Rocky Mountains. On the 5th the storm-center passed southeast over the Lake region and apparently united with low area III which advanced from the southward, and light rain fell in areas in the upper Mississippi valley. From the 1st to 3d the highest temperatures of the month occurred from the north Pacific coast over the middle plateau.

III.—Appeared over western Virginia on the 4th and moved thence to the lower lake region by the 5th, attended by heavy rain and thunder storms in the middle and south Atlantic states, and rain in the Ohio Valley and lower lake region. During the 6th and 7th the storm-center moved along the Saint Lawrence Valley to the Gulf of Saint Lawrence, with heavy rain in the Atlantic coast states north of the Carolinas, and destructive local storms from the Ohio Valley over the middle Atlantic states and New England. The barometric depression attending this storm was slight, and it was characterized chiefly by heavy rainfall.

IV.—Appeared central over Alberta on the 8th and 9th, with pressure about 29.50 on the latter-named date, and wind velocities of 30 to 40 miles per hour in the middle Missouri valley. By the evening of the 10th the storm had moved to North Dakota, with rain areas from the west part of the upper lake region to the middle Missouri valley, wind velocities exceeding 40 miles per hour in the Dakotas, and heavy thunder and hail storms in Utah. Deflected northeastward by high area II, which occupied the east-central part of the country, the storm was central over eastern Manitoba the evening of the 11th, on which date the rain area extended to eastern Kansas. From this position the storm moved eastward with diminished energy and disappeared over the Gulf of Saint Lawrence during the 13th, with rain and thunder storms from the upper Mississippi valley over the Lake region, New England, and the Canadian Maritime Provinces, and fresh gales over the Great Lakes.

V.—Apparently advanced from the north Pacific coast and the morning of the 13th was central over eastern Oregon, with rain on the middle and north Pacific coasts. Moving rapidly eastward the storm reached the Dakotas the morning of the 14th, and the evening of that date was central over the extreme upper Mississippi valley, its passage being attended on the 13th by winds reaching 40 miles per hour in the region north of Montana, and on the 14th by wind velocities of 30 to 40 miles per hour from the middle Missouri valley to Kansas and Missouri, rain from Manitoba to the upper lake region, and severe local storms in Michigan, Wisconsin, and Minnesota. During the 15th the storm-center moved over the Lake region and disappeared over the Canadian Maritime Provinces, with wind velocities of 30 to 40 miles per hour over the Great Lakes, and severe local storms in northern Pennsylvania. On this date the rain area extended eastward from the Lake region over New England. This storm had the most rapid advance movement, 35 miles per hour, noted in connection with the low areas of the month.

VI.—Appeared north of Montana the evening of the 14th, with central pressure about 29.50, and passed thence to southwestern Manitoba by the evening of the 15th, with wind velocities of 30 to 40 miles per hour in the middle and upper Missouri valleys. By the morning of the 16th the center of disturbance had shifted its position to South Dakota, where it united with low area VI*a*, which had advanced from the westward. On this date wind velocities of 30 to 40 miles per hour were reported in the middle Missouri valley and thence over the upper lakes, rain fell in the north part of the upper lake region, and heavy thunderstorms occurred in upper Michigan. Deflected northeastward by high area III, which occupied the eastern part of the country, this storm was central over eastern Manitoba the morning of the 17th, with pressure below 29.50, whence it moved north of Lake Superior by the evening of that date, with wind velocities of 30 to 40 miles per hour from the middle Missouri valley over the upper lakes, and rain and heavy thunderstorms in North Dakota. Moving rapidly eastward the storm disappeared over the Gulf of Saint Lawrence during the the 18th, its passage being attended by violent thunderstorms from the Lake region over north New England. On the 15th and 16th the highest temperature of the month was noted at stations on the middle and northeast slopes of the Rocky Mountains, and in the middle Missouri valley.

VI*a*.—First appeared over western Nevada the morning of the 15th and moved to northeast Nevada by the evening of that date, with rain on the middle Pacific coast, and heavy wind, rain, and thunder storms, and the first snow of the season in the Sierra Nevada Mountains in east-central California. Passing thence to South Dakota this storm united with low area VI the morning of the 16th.

VII.—Apparently advanced from the north Pacific Ocean and the evening of the 17th was central over Alberta, with pressure falling to 29.40, rain, and heavy gales on the north Pacific coast. During the 18th and 19th the storm moved slowly eastward to Manitoba, with wind velocities of 30 to 50 miles per hour, and rain in the Missouri and Red River of the North valleys on the 18th, and on the 19th by severe wind and thunder storms in the Dakotas and Minnesota. During the 20th the center of disturbance moved over the north part of the Lake region, with diminished energy, and disappeared north of the Saint Lawrence Valley. From the 18th to 20th the highest temperature of the month occurred at stations from the Dakotas over the west part of the Lake region.

Attending the advance and passage of low areas VI and VII exceptionally warm weather prevailed in the north-central districts. In the Dakotas, Minnesota, Wisconsin, Michigan, northern Illinois, and northeastern Iowa the 16th and 17th were the warmest days on record for the season, and the maximum temperature was the highest ever reported for the second decade of September. During the 18th the warm wave extended over the central valleys and the Lake region.

VIII.—Apparently advanced from the north Pacific Ocean and was central north of Montana the evening of the 22d, with

pressure below 29.50, rain on the north Pacific coast and over the middle plateau region, and wind velocities of 30 to 50 miles per hour in the Dakotas. Following a course similar to that pursued by number VII, this disturbance disappeared north of the Saint Lawrence Valley the night of the 24th. On the 23d wind velocities of 30 to 40 miles per hour and rain were reported from the British Northwest Territory to Kansas, and severe local storms occurred in Nebraska. During the 24th the storm diminished in strength and rain fell in areas from the Red River of the North Valley to New Mexico.

The period of high temperature noted in connection with low areas VI and VII continued. In upper Michigan the 23d was the warmest September day on record. In Minnesota, parts of Iowa, in lower Michigan and thence eastward to New England the weather was unusually warm, and from the 22d to 24th the highest temperature of the month was noted from the middle Mississippi valley and the east part of the Lake region to the east Gulf states.

IX.—Appeared central over northern Alberta on the 25th, and moved to Manitoba by the evening of the 26th, with central pressure below 29.50, and rain along the middle-eastern slope of the Rocky Mountains and in the middle Missouri valley. By the morning of the 27th the center of disturbance moved to the Lake Superior region, and during that date the center shifted its position to South Dakota, this course being apparently influenced in some degree by high pressure to the eastward attending high area V. On this date the rain extended over the central valleys, and a heavy windstorm was reported in the north-central counties of Minnesota. By the 28th the center had moved to the Lake Superior region, with rain in the central valleys and over the west part of the Lake region, high winds from the lower Missouri and middle Mississippi valleys to the Great Lakes, violent gales over the upper lakes, and local storms in the middle Mississippi valley. Moving eastward the storm-center disappeared over the Gulf of Saint Lawrence the night of the 29th. On this date the rain area extended to the Atlantic coast, and gales of exceptional severity prevailed over the Lake region.

X and X*a*.—Low area X advanced from the north Pacific Ocean and the evening of the 28th was central over Alberta, with rain and hard gales on the north Pacific coast. On this date the greatest abnormal fall in pressure in 12 hours noted for the month, .62, was reported at Calgary, N. W. T. During the 29th the storm-center moved slowly eastward north of Montana, with pressure below 29.40, the lowest pressure noted for the month, 29.32, being reported at Medicine Hat, N. W. T., in the morning. On this date the rain area extended over the northern plateau region, and wind velocities of 30 to 60 miles were reported in the middle and upper Missouri valleys. During the 30th this storm area was apparently deflected southward by high area VI, which occupied the east part of the Lake region, and appeared to unite with low area X*a*, which occupied the middle plateau region on the 29th. Low area X*a* developed great energy during its passage eastward, central pressure falling below 29.40 and wind velocities of 30 to 60 miles per hour from Utah to the middle Missouri valley being reported on the 29th and 30th, and the first snow of the season fell over Montana, Idaho, northern Nevada, northern Wyoming, east Oregon, and in the mountains of east-central California on the 30th. Attending the recurve of low area X on the 30th, the greatest abnormal rise in temperature in 12 hours noted for the month, 26°, was reported at Winnipeg, Man.

Tabulated statement showing principal characteristics of areas of high and low pressure.

Barometer.	First observed. Date.	First observed. Lat. N.	First observed. Long. W.	Last observed. Lat. N.	Last observed. Long. W.	Duration.	Velocity per hour.	Maximum pressure change and maximum abnormal temperature change in twelve hours and maximum wind velocity. Station.	Rise.	Date.	Station.	Fall.	Date.	Station.	Direction.	Miles per hour.	Date.
High areas.		°	°	°	°	*Days.*	*Miles.*		*Inch.*			°					
I	1	52	114	46	64	4·5	28	Calgary, N. W. T	·42	1	Rapid City, S. Dak	28	1	Fort Sill, Okla. T	n.	32	2
II	5	52	109	40	72	5·5	21	Minnedosa, Man	·40	5	Moorhead, Minn	16	8	Kitty Hawk, N.C	e.	20	11
III	12	50	103	36	75	5·0	20	Medicine Hat, N. W. T	·36	12	San Antonio, Tex	18	14	Jupiter, Fla	ne.	36	17
IV	19	47	80	42	72	1·0	21	Port Arthur, Ont	·42	18	Rockliffe, Ont	17	19	Kitty Hawk, N.C	ne.	18	20
V	23	46	125	42	70	3·0	40	Calgary, N. W. T	·62	23	Dodge City, Kans	27	24	Fort Canby, Wash	nw.	16	22
VI	27	47	125	45	74	3·0	40	Father Point, Quebec	·44	30	Concordia, Kans	23	29	Abilene, Tex	n.	36	29
Mean						3·7	28		·44			21				26	
Low areas.									Fall.			Rise.					
I	1	47	98	49	69	3·0	22	La Crosse, Wis	·28	1	La Crosse, Wis	15	1	Custer Station, Mont	n.	60	1
II	2	51	116	49	90	2·5	20	Calgary, N. W. T	·56	2	Custer Station, Mont	24	3	Huron, S. Dak	se.	42	4
III	4	36	82	50	64	2·5	23	Rockliffe, Ont	·24	6	Kingston, Ont	11	6	Sandy Hook, N. J	e.	28	5
IV	9	51	115	50	67	3·5	30	Medicine Hat, N. W. T	·38	9	Bismarck, N. Dak	18	10	Huron, S. Dak	se.	44	10
V	13	45	119	43	77	2·5	35	Qu' Appelle, N. W. T	·52	13	La Crosse, Wis	21	14	Swift Current, N. W. T	se.	40	13
VI	14	50	111	50	69	3·5	32	Calgary, N. W. T	·38	14	Duluth, Minn	21	17	Huron, S. Dak	se.*	44	16
VIa	15	38	118	45	103	1·0	37	Winnemucca, Nev	·14	15	Winnemucca, Nev	14	15	Keeler, Cal	sw.	49	15
VII	17	52	128	47	82	3·5	25	Prince Albert, N. W. T	·34	18	Pierre, S. Dak	23	18	Moorhead, Minn	sw.	54	19
VIII	22	52	112	49	87	2·0	24	do	·38	22	Denver, Colo	20	23	Huron, S. Dak	s.†	50	22
IX	25	53	113	50	68	4·5	31	Medicine Hat, N. W. T	·40	25	Medicine Hat, N. W. T	24	25	Saint Louis, Mo	sw.‡	46	28
X	28	50	117	47	99	1·5	25	Calgary, N. W. T	·64	28	Winnipeg, Man	26	30	Fort Canby, Wash	se.	72	28
X*a*	29	41	113	41	103	1·0	21	Salt Lake City, Utah	·44	29	Pueblo, Colo	20	29	Sioux City, Iowa	s.	50	30
Mean						2.6	27		·39			20				48	

* Mount Washington, N. H., nw., 84, 18th. † Mount Washington, N. H., nw., 99, 25th. ‡ Mount Washington, N. H., nw., 89, 30th.

NORTH ATLANTIC STORMS FOR SEPTEMBER, 1891 (pressure in inches and millimeters; wind-force by Beaufort scale).

The paths of storms that appeared over the north Atlantic Ocean during September, 1891, are shown on Chart I. These paths have been determined from observations by shipmasters received through the co-operation of the Hydrographic Office, Navy Department, and the "New York Herald Weather Service."

Severe storms were encountered along the trans-Atlantic steamship routes; two storms of marked energy advanced from the sub-tropical region north of the West Indies; and cyclonic disturbances appeared over the Gulf of Mexico during the second and third decades of the month.

On the 1st a storm of great energy was central northwest of the British Isles, whence it moved slowly eastward over the North Sea by the 3d, with violent gales and heavy rain in Great Britain and Ireland. On the 6th a storm appeared central northeast of the Bahamas, whence it moved rapidly northward to the east New England coast the evening of the 7th, and passed thence northeastward over Newfoundland during the early part of the 8th. During the 7th this storm was